

REMARKS

The Office Action dated May 22, 2009, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1 and 24-61 are currently pending in the application, of which claims 1 and 24-27 are independent claims. Claims 1 and 24-25 have been amended to more particularly point out and distinctly claim the invention. Claims 62-63 have been cancelled without prejudice or disclaimer. No new matter has been added. Claims 1 and 24-61 are respectfully submitted for consideration.

The Office Action objected to claims 62-63 under 35 CFR §1.75(c) as allegedly being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 62-63 have been cancelled without prejudice or disclaimer. Withdrawal of the objection as moot is respectfully requested.

The Office Action rejected claims 1, 24-27, 29-30, 43-44, and 57-58 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over U.S. Patent No. 6,219,697 of Lawande *et al.* (“Lawande”). The Office Action acknowledged that not all of the claim features are disclosed by Lawande, but asserted that the remaining features would have been obvious. Applicant respectfully traverses this rejection.

Claim 1 is directed to a system including a port connector and a plurality of modules configured to communicate data between each other through the port connector. The modules are configured to communicate a data package comprising in a layered

structure a physical layer including a first and a second segment to encapsulate other layers in said data package, a data link layer comprising a first header field for data payload type and a second header field for a data link layer version, and a network/transport layer comprising a third header field for a transmitting module's address, a fourth header field for a length of said data package, a fifth header field for an offset value for determination of data payload start in said data package, and comprising data payload.

Claim 24, upon which claims 28-41 depend, is directed to an apparatus including at least one memory including computer program code and at least one processor. The at least one memory and the computer program code are configured to, with the at least one processor, cause the apparatus at least to receive a data package configured to be communicated between modules connected through a port connection. The data package includes, in a layered structure, physical layer data comprising a first and a second segment to encapsulate other layers in said data package, data link layer data in a first header field comprising data payload type and in a second header field comprising a data link layer version, and network/transport layer data in a third header field comprising a transmitting module's address, in a fourth header field comprising a length of said data package, in a fifth header field comprising an offset value for determination of data payload start in said data package, and comprising data payload.

Claim 25, upon which claims 42-61 depend, is directed to an apparatus including at least one memory including computer program code and at least one processor. The at

least one memory and the computer program code are configured to, with the at least one processor, cause the apparatus at least to transmit a data package configured to be communicated between modules connected through a port connection. The data package comprises, in a layered structure, physical layer data comprising a first and a second segment to encapsulate other layers in said data package, data link layer data in a first header field comprising data payload type and in a second header field comprising a data link layer version, and network/transport layer data in a third header field comprising a transmitting module's address, in a fourth header field comprising a length of said data package, in a fifth header field comprising an offset value for determination of data payload start in said data package, and comprising data payload.

Claim 26, upon which claims 56-61 depend, is directed to a method including establishing, by a transmitter, data communication between modules connected through a port connection, wherein said modules each communicate a data package comprising in a layered structure a physical layer comprising a first and a second segment to encapsulate other layers in said data package. The establishing includes providing, in said data package, in a data link layer, a first header field for data payload type and a second header field for a data link layer version. The establishing also includes providing, in said data package, in a network/transport layer, a third header field for a transmitting module's address and a fourth header field for a length of said data package and a fifth header field for an offset value for determination of data payload start in said data

package. The establishing further includes providing, in said data package, a data payload.

Claim 27 is directed to a computer program embodied on computer-readable storage medium and comprising code configured to perform a process when said program is run in a processor. The process includes establishing data communication between modules connected through a port connection, wherein said modules each communicate a data package comprising in a layered structure a physical layer comprising a first and a second segment to encapsulate other layers in said data package. The establishing includes providing, in said data package, in a data link layer, a first header field for data payload type and a second header field for a data link layer version. The establishing also includes providing, in said data package, in a network/transport layer, a third header field for a transmitting module's address, a fourth header field for a length of said data package, and a fifth header field for an offset value for determination of data payload start in said data package. The establishing further includes providing, in said data package, a data payload.

Applicant respectfully submits that Lawande fails to disclose or suggest all of the elements of any of the presently pending claims.

Applicant respectfully submits that the Office Action has attempted to identify corresponding elements, for those of claim 1, in Lawande by selecting features of any elements without consideration for the factual association described in the description.

This is improper, as both the claims and the references must be considered as a whole, and the claims must be read in light of the specification.

Certain embodiments of the present invention involve the provision of a number of fields within the header of the transported packet, such as an IP, or OBEX type packet, where (on the other hand) Lawande discusses the provision of fields in the header of the enveloping layer IEEE 1394.

The Office Action responded by noting that “IP” and “OBEX type” are not found in the claims. However, Applicant respectfully submits that the context of the application provides light on the claims, as the Office Action admitted: “the claims are interpreted in light of the specification” (Office Action, page 9). Thus, the discussion in the specification must not be ignored in properly construing the claims, and the discussion in the specification places boundaries on what the broadest reasonable interpretation of the claims is.

From Figure 5 of Lawande it is evident that the IP packet is provided on a different layer than the Common Packet Header (CPR), which is a part of the IEEE link layer, as that term would be understood to one of ordinary skill in the art. Furthermore, in column 17, in Lawande, it is stated that the protocol IEEE 1394 “has a field in the header which has memory information of the target of the packet of the data.” However, to integrate the two protocols, the field is modified, putting in the “protocoltype” field in the packet header.

Hence, it is clearly shown that the “protocoltpe” field according to Lawande is located in the header of the IEEE 1394 protocol, whereas the “data payload type” field according to certain embodiments of the present invention is located in the header of the transported packet, or (more specifically) the data segment. This is further supported in the description portion of the present application on page 15, lines 18- 21: “in this context when referring to a header section, the header section of the data segment is meant unless specifically stated otherwise.” Accordingly, Lawande does not disclose a protocol type identifier in the header of the encapsulated data segment.

In response to the above, the Office Action stated disagreement and reiterated a portion of the rejection verbatim, neither of which is a response that advances prosecution, since Applicant has already explained the deficiencies of the rejection as stated.

In addition, the Office Action stated: “the claim recites a data link layer comprising the data payload type, constituting the IEEE 1394 link layer comprising the protocol type in Lawande.” However, it is unclear how this is supposed to address the distinctions identified above, since it seems simply to be a conclusory assertion that the mapping in the claims is proper.

More specifically, certain embodiments of the present invention relate to the provision of a “data payload type” field in the header of the data segment encapsulated in between the two segments of the physical layer referred to in claim 1 and shown (in one

embodiment) as 12a and 12b in Fig. 1a. This, however, is not reflected in fig. 7c in Lawande, because Lawande does not disclose what is recited in claim 1.

Lawande, furthermore, would not lead one of ordinary skill in the art toward the claimed invention. Lawande has been considered (by the USPTO) as the closest prior art, since it allegedly has some elements in common. The objective problem to be solved by a person of ordinary skill in the art in light of Lawande could be characterized as follows: How to integrate IEEE 1394 protocols with IP protocols. A person of ordinary skill in the art facing this problem could perhaps, in light of Lawande, know how to integrate a IEEE 1394 protocol with IP protocols.

It would not, however, be obvious for a person of ordinary skill in the art to provide a header of a data segment with a field specifying the content of said specific data segment. More specifically, certain embodiments of the present invention relate to the provision of backward and forward compatibility of a data link layer protocol in a system of connecting modules through a port connection. Further, another object of certain embodiments of the present invention relate to the way of managing packets of a number of different protocols simultaneously. These objects (nor any similar) cannot be found in the cited art. Thus, the cited art would not lead one of ordinary skill in the art toward the claimed invention.

The Office Action responded by noting that “backward and forward compatibility” and “way of managing packets of a number of different protocols simultaneously” are not found in the claims. However, Applicant respectfully submits that the advantages of

certain embodiments of the present invention do not have to be recited to provide evidence of non-obviousness. Thus, the advantages must not be ignored in properly assessing the non-obviousness of the claims, and the discussion of the advantages provides evidence that would rebut a *prima facie* case of obviousness, if such had been presented (not admitted).

The Office Action also repeated a portion of the rejection and pointed out that the alleged mapping between Lawande and the claims is between the claimed physical layer and the physical layer of Lawande. The Office Action also stated, “An alternate interpretation is that the physical layer is formed by data from the upper layers, and Lawande discloses the format of IP packet together with the IEEE 1394 layer, thus forming first and second segments at the physical layer.” It is unclear why the Office Action has taken the position that something other than the physical layer of Lawande should allegedly correspond to the physical layer of the present claims. To the extent that this alternative ground is relied upon, it is respectfully submitted that it requires reading the claims in an unreasonably broad way.

Additionally, Lawande does not disclose “an offset value for determination of data payload start in said data package,” as recited in (for example) claim 1. According to the description of the present application, on page 5, line 28, to page 6, line 3, the offset value can provide means for compensating for future changes to the network/transport protocols, since the receiving module (through the offset value) may jump directly to the

payload start when the receiving module does not require the potential data from the header.

Furthermore, according to the description of the present application on page 18, lines 20-28, the offset field can be incorporated in the header section to make the header backward compatible. When future fields are added to the header, any software can forward payload data even though the software is aware of the additional fields, since the software may forward the data package based on the Offset and the Version field. Hence, this field can permit compensation for future extensions of the header section, as there might be a need in the future for additional fields in the header. These extensions can be added while still being backward compatible, the Offset field will tell the receiving entity where the actual data package starts.

In contrast to the above, and in contrast to the feature “an offset value for determination of data payload start in said data package,” the common packet header in Fig. 7C of Lawande contains a destination offset field in order to comply with the IEEE 1394's requirement of including memory architecture information. However, the reference to ip_fragment_offset in Lawande is a part of the IP protocol, which has to do with fragmenting a large non-IP packet into several, smaller IP packets. More specifically, to fragment a datagram, the header size is used to calculate how many fragments are required. The header of the original datagram is then copied into the headers of each of the fragments. The fragment offset reflects the position of the fragment within the original datagram. Each fragment becomes its own datagram and is

routed independently of any other datagrams. This makes it possible for the fragments of the original datagram to arrive at the final destination out of order. At the final destination, the fragment offset field tells the receiver how to order the fragments. Hence, the concept of the Offset field according to the discussion in the present application's specification (and recited in claim 1: "an offset value for determination of data payload start in said data package") is not disclosed in Lawande.

Indeed, in Lawande there is nothing that would lead a person skilled in the art closer in respect of using an offset field in the way it is used according to the present claims. Furthermore, the solution according to Lawande may have a number of drawbacks. Firstly, the `protocol_type` field is multiplexed with the memory information field, making it complex when decoding the field. Secondly, the solution according to Lawande renders it difficult or impossible to mix different protocol types in the same connection. Lawande is specifically designed for transfer of IP messages, whereas certain embodiments of the present invention allow a combination of multiple protocols sent simultaneously on the same connection without resetting or changing its state. For instance, OBEX and IP packages can be sent alternating in respect to each other without resetting the connection.

The Office Action, at pages 15-16 responded similarly to the previous responses, and the Office Action's responses have similar flaws. In particular, the Office Action insisted that one of ordinary skill in the art would have found it obvious "to use an offset field similar to the fragment offset field, e.g., the payload offset field, to determine the

start of the payload. Thus Lawande discloses “an offset value for determination of data payload start in said data package,” as claimed” (Office Action, page 16). Applicant respectfully disagrees.

First, Lawande does not disclose “an offset field similar to the fragment offset field.” Lawande specifically mentions “ip_fragment_offset” and does not suggest or in hint in the least that any variation at all to this field is either possible or desirable. Accordingly, Lawande does not fairly disclose or suggest using “an offset field similar to the fragment offset field.”

Second, Lawande’s “ip_fragment_offset” or anything like it would not correspond to the “an offset value for determination of data payload start in said data package,” as recited in (for example) claim 1. The ip_fragment_offset field identifies an offset, but it is not an offset that expresses a relationship within the packet itself. The offset expressed by ip_fragment_offset is an offset of the content of the fragment with respect to an original packet upon which the fragment is based. This could be called an “inter-package” offset.

In contrast, the offset recited in the claim is an offset that is expressed with respect to the data package that contains the offset field. Thus, this could be called an “intra-package” offset. Thus, the two different kinds of offsets (inter-package offset and intra-package offset) have completely different functions and roles in the packet. Accordingly, it would not be obvious to one of ordinary skill in the art to change one kind

of offset into the other, because doing so would fundamentally alter the operation of the field.

Specifically, if one made the ip_fragment_offset field into an offset that determined “data payload start in said package” (as contrasted with the payload start in an original packet from which the package is derived as in the ip_fragment_offset instance), then the ip_fragment_offset field would not work properly, since it would not permit the reassembly of a fragmented original packet, which is what its purpose is in Lawande.

Such a change, therefore, would necessarily render Lawande inoperable for its intended purpose. MPEP 2143.01(V) states “THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE,” (Capital letters in original.) and explains that “If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” Moreover, MPEP 2145(VI) states that “the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose.” Thus, in this case, since the proposed modification to Lawande’s ip_fragment_offset would render Lawande inoperable for its intended purpose, such a modification is *per se* non-obvious.

The Office Action further argued that “using a field in a message to determine the start of payload is well known in the art” and cited U.S. Patent No. 5,937,169 of Connery

et al. (“Connery”) as allegedly supporting this contention. However, as is plain from Figure 4 of Connery, the “data offset field” of Connery is in the TCP header, while the “fragment offset” (corresponding to Lawande’s “ip_fragment_offset”) is found in the IP header of Connery. Thus, Connery does not provide motivation to modify Lawande’s “ip_fragment_offset” into a “data offset” as shown in Figure 4 of Connery, nor into the claim features.

Furthermore the proposed motivation to modify Lawande is plainly erroneous. The Office Action stated that the reason for the modification would be “in order to quickly identify the start of the payload and thus effectively perform packet processing.” This motivation is fundamentally flawed. Lawande is presumptively already able to perform packet processing. If packet processing could not be performed on Lawande’s packets without further modification, then Lawande would not be enabled, but U.S. law presumes that granted patents are enabled.

Furthermore, adding an additional field to Lawande would not be expected to enhance the speed of finding the start of the payload in Lawande. Lawande’s structure as illustrated in Figure 7C requires that the payload starting point in Lawande is always the same and therefore already known *a priori* to the processing system. Adding a data field that conveyed already known information would be against common sense. Thus, it would not have been obvious to one of ordinary skill in the art to include such a field in Lawande’s structure. Therefore, it is respectfully maintained the rejection is improper and should be withdrawn.

Hence, for all the preceding reasons, it is respectfully submitted that the subject-matter of the claimed invention in claim 1 is not obvious in view of Lawande. Although each of the independent claims has its own unique scope, the same reasoning as for independent claim 1 is also valid for each of independent claims 24-27, as they contain corresponding features to those discussed above, with respect to claim 1. Thus, it is respectfully requested that each of the rejections of each of claims 1 and 24-27 be withdrawn.

Claims 29-30, 43-44, and 57-58 depend respectively from, and further limit, claims 24-26. Thus, each of claims 29-30, 43-44, and 57-58 recites subject matter that is neither disclosed nor suggested in Lawande. It is, therefore, respectfully requested that the rejection of claims 29-30, 43-44, and 57-58 be withdrawn.

The Office Action rejected claims 28, 42, and 56 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Lawande in view of U.S. Patent No. 5,572,528 of Shuen (“Shuen”). The Office Action acknowledged certain deficiencies of Lawande with respect to the rejected claims and cited Shuen to remedy such deficiencies. Applicant respectfully traverses this rejection.

Claims 28, 42, and 56 depend respectively from, and further limit, claims 24-26. Thus, each of claims 28, 42, and 56 recites subject matter that is neither disclosed nor suggested in Lawande. Shuen does not remedy the deficiencies of Lawande.

Shuen generally relates to a mobile networking method and apparatus. Thus, for this reason, as well as because Shuen was cited only as to features of the dependent

claims, it is unsurprising that Shuen fails to remedy the above-identified deficiencies of Lawande. Therefore, the combination of Lawande and Shuen fails to disclose or suggest all of the elements of the rejected claims and it is respectfully requested that the rejection of claims 28, 42, and 56 be withdrawn.

The Office Action rejected claims 31-41, 45-55, and 59-63 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Lawande in view of U.S. Publication No. 2003/0214928 of Chuah (“Chuah”). The Office Action acknowledged certain deficiencies of Lawande with respect to the rejected claims and cited Chuah to remedy such deficiencies. Applicant respectfully traverses this rejection.

Claims 31-41, 45-55, and 59-63 depend respectively from, and further limit, claims 24-26. Thus, each of claims 31-41, 45-55, and 59-63 recites subject matter that is neither disclosed nor suggested in Lawande. Chuah does not remedy the deficiencies of Lawande

Chuah generally relates to a method for paging a device in a wireless network. Thus, for this reason, as well as because Chuah was cited only as to features of the dependent claims, it is unsurprising that Chuah fails to remedy the above-identified deficiencies of Lawande. Therefore, the combination of Lawande and Chuah fails to disclose or suggest all of the elements of the rejected claims and it is respectfully requested that the rejection of claims 31-41, 45-55, and 59-63 be withdrawn.

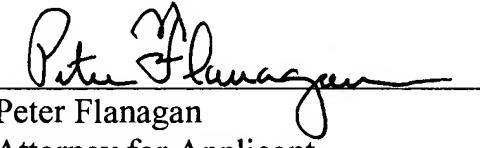
For the reasons set forth above, it is respectfully submitted that each of claims 1 and 24-61 recites subject matter that is neither disclosed nor suggested in the cited art. It

is, therefore, respectfully requested that all of claims 1 and 24-61 be allowed, and that this application be passed to issuance.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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